

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 0003248.00045

In the Application of:

MULLIGAN, Anthony C., et al.

Serial No. 10/005,085

Filed: December 4, 2001

For: MULTI-FUNCTIONAL COMPOSITE STRUCTURES

Examiner: Unassigned

Art Unit: 1732

#5  
D.B.  
9-11-02

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

Pursuant to 37 CFR §§1.97-1.98, applicants wish to make the following references of record in the above-identified application. Copies of the references cited below are enclosed. The references also are listed on the enclosed and completed Form PTO/SB/08A.

This Information Disclosure Statement is filed under 37 CFR §1.97(b) within three months of this application's filing date and/or before the mailing of a first Office Action on the merits. Accordingly, there is no fee due for filing this Information Disclosure Statement.

REFERENCES

U.S. Patents

- |    |           |                          |                    |
|----|-----------|--------------------------|--------------------|
| 1. | 6,063,502 | Sue, J. Albert, et al.   | May 16, 2000       |
| 2. | 5,645,781 | Popovic', Dragan, et al. | July 8, 1997       |
| 3. | 4,772,524 | Coblentz, William S.     | September 20, 1988 |

Foreign

- |    |                |                             |               |
|----|----------------|-----------------------------|---------------|
| 1. | WO 01/53059 A1 | Goretta, Kenneth C., et al. | July 26, 2001 |
|----|----------------|-----------------------------|---------------|


RECEIVED  
APR 05 2002  
TC 1700

## Non-Patent Literature Documents

1. J.J. BRENNAN and K. M. PREWO, "Silicon Carbide Fibre Reinforced Glass-Ceramic Matrix Composites Exhibiting High Strength and Toughness," *J. Mater. Sci.*, 17 2371-83 (1982).
2. G. HILMAS, et al., "Fibrous Monoliths: Non-Brittle Fracture from Powder-Processed Ceramics," *Mat. Sci. & Eng.* A195, 263-268 (1995).
3. G.E. HILMAS, et al., "SiC and Si<sub>3</sub>N<sub>4</sub> Fibrous Monoliths: Non-Brittle Fracture From Powder Processed Ceramics Produced by Coextrusion," Vol. 51 *Ceramic Processing Science and Technology*, pp. 609-14 (1993).
4. H. KODAMA, et al., "Silicon Carbide Monofilament-Reinforced Silicon Nitride or Silicon Carbide Matrix Composites," *J. Am. Ceram. Soc.*, 72 [4] 551-58 (1989).
5. D. KOVAR, et al., "Fibrous Monolithic Ceramics," *J. Am. Ceram. Soc.*, 80 [10] 2471-2487 (1997).
6. P.J. LAMICQ, et al., "SiC/SiC Composite Ceramics," *Am. Ceram. Soc. Bull.*, 65 [2] 336-38 (1986).
7. T. I. MAH, et al., "Recent Developments in Fiber-Reinforced High Temperature Ceramic Composites," *Am. Ceram. Soc. Bull.*, 66 [2] 304-08 (1987).
8. K.M. PREWO, "Fiber-Reinforced Ceramics: New Opportunities for Composite Materials," *Am. Ceram. Soc. Bull.*, 68 [2] 395-400 (1989).
9. K.M. PREWO and J.J. BRENNAN, "High-Strength Silicon Carbide Fibre-Reinforced Glass-Matrix Composites," *J. Mater. Sci.*, 15 463-68 (1980).
10. J.R. STRIFE, et al., "Status of Continuous Fiber-Reinforced Ceramic Matrix Composite Processing Technology," *Ceram. Eng. Sci. Proc.*, 11 [7-8] 871-919 (1990).

Respectfully submitted

Date: March 28, 2002

  
Julie B. Ackerman  
Registration No. 50,867  
BANNER & WITCOFF, LTD.  
10 South Wacker Drive  
Suite 3000  
Chicago, Illinois 60606  
Telephone: 312-715-1000  
Facsimile: 312-715-1234

03-29-02

1732

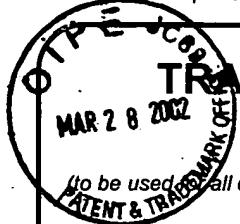
PTO/SB/21 (08-00)

Please type a plus sign (+) inside this box → ☐

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

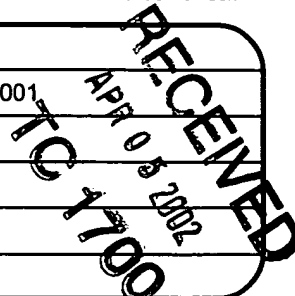
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/005,085
Filing Date	December 4, 2001
First Named Inventor	Mulligan
Group Art Unit	1732
Examiner Name	Unassigned
Attorney Docket Number	003248.00045
Total Number of Pages in This Submission	



## ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) <sup>N</sup>	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <b>14 References</b> <b>Certificate of Express Mail</b> <b>Return Postcard</b>
Remarks The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed. Express Mail No. EV 075513370 US		

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Julie B. Ackerman Banner & Witcoff, Ltd.
Signature	
Date	March 28, 2002

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: <input type="text"/>			
Typed or printed name			
Signature		Date	

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



CERTIFICATE OF EXPRESS MAIL  
(PATENT)

Attorney Docket No. 03248.00045

Express Mail No. EV 075513370 US  
Deposited March 28, 2002

I hereby certify that the attached correspondence, identified below, is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" under §37 CFR 1.10 on the date indicated above and is addressed to Assistant Commissioner for Patents, Washington, DC 20231.

By: \_\_\_\_\_

Mulligan, et al., U.S. Patent Application No. 10/005,085 for "MULTI-FUNCTIONAL COMPOSITE STRUCTURES"

- Transmittal Form (in duplicate)
- Information Disclosure Statement (2 pages)
- Form PTO/SBA/08A (1 page)
- 14 References
- Return Receipt Postcard

RECEIVED  
APR 05 2002  
TC 1700

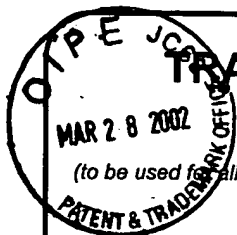
Please type a plus sign (+) inside this box → ☐

PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number 10/005,085

Filing Date December 4, 2001

First Named Inventor Mulligan

Group Art Unit 1732

Examiner Name Unassigned

Attorney Docket Number 003248.00045

## ENCLOSURES (check all that apply)

☐ Fee Transmittal Form

☐ Fee Attached

☐ Amendment / Response

☐ After Final

☐ Affidavits/declaration(s)

☐ Extension of Time Request

☐ Express Abandonment Request

☒ Information Disclosure Statement

☐ Certified Copy of Priority Document(s)

☐ Response to Missing Parts/ Incomplete Application

☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

☐ Assignment Papers (for an Application)

☐ Drawing(s)

☐ Licensing-related Papers

☐ Petition

☐ Petition to Convert to a Provisional Application

☐ Power of Attorney, Revocation Change of Correspondence Address

☐ Terminal Disclaimer

☐ Request for Refund

☐ CD, Number of CD(s) \_\_\_\_\_

☐ After Allowance Communication to Group

☐ Appeal Communication to Board of Appeals and Interferences

☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)

☐ Proprietary Information

☐ Status Letter

☒ Other Enclosure(s) (please identify below):

14 References  
Certificate of Express Mail  
Return Postcard

Remarks

The Commissioner is authorized to charge any fees in connection with this correspondence to Deposit Account No. 19-0733. A duplicate of this sheet is enclosed.

Express Mail No. EV 075513370 US

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name

Julie B. Ackerman  
Banner & Witcoff, Ltd.

Signature

Date

March 28, 2002

RECEIVED  
APR 05 2002  
TC 1780

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: \_\_\_\_\_

Typed or printed name

Signature

Date

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.